

HIV Transmission Categories and Subpopulations

Men Who Have Sex with Men (MSM)

More than 41,000 AIDS cases have been confirmed to date among MSM; 83 percent of these were residents of New York City at the time of diagnosis (see Figure 9-3). Although the majority of MSM cases have been among white men, the proportion of cases among MSM of color has been increasing over time, particularly in New York City (see Figures 15-2 and 15-3). Nearly two-thirds of new AIDS diagnoses in New York City MSM in 1999 are among men of color. In the rest of the state, men of color account for nearly half of cases diagnosed in 1999.

Injecting Drug Users

Thirty-one percent of adult AIDS cases diagnosed in New York State in 1999 are attributed to personal use of injecting drugs (see Figure 15-1b), in marked contrast to the much lower proportion of cases among IDU confirmed in the United States as a whole in 1999 (see Figure 9-4b). Injecting drug use accounted for 31.0 percent of all new cases among Blacks, 36.3 percent of new cases among Hispanics and 29.6 percent of new cases among women.

Of all cases diagnosed from 1996 to 1999, more than 40 percent are directly attributed to injecting drug use, including 10,894 cases in IDUs and 486 in MSM/IDUs. HIV transmission attributed to heterosexual contact with an individual with a history of injecting drug use accounted

for an additional 977 AIDS cases (see Figure 15-6). At least one-fourth of pediatric AIDS cases diagnosed in New York State since 1996 resulted from perinatal transmission of HIV from a woman with a history of injecting drug use (20.3%) (see Figure 12-1), or who reported sexual contact with an IDU (6.0%).

Heterosexually Exposed Individuals

Heterosexual HIV transmission accounted for 14.8 percent of AIDS cases diagnosed in 1999 (see Figure 15-1b). To date, 12,883 AIDS cases in New York State have been attributed to heterosexual transmission, and more than a third of those have been diagnosed in the last four years. Male cases have been increasing steadily as a proportion of heterosexually acquired AIDS cases, accounting for more than one-third of those diagnosed in 1999.

Of heterosexually acquired cases diagnosed in the last four years (1996-1999), 22.3 percent are attributed to sexual contact with an IDU, 0.8 percent are attributed to heterosexual contact with a bisexual man, and 0.3 percent are attributed to heterosexual contact with a person who acquired HIV through receipt of blood products (see Figure 15-6). However, for 76.6 percent, the HIV risk of the infected partner was either not known or not reported and, therefore, not classified in this category. Many of these cases may be heterosexual partners of IDUs whose risk was not known

to the partner or not reported to the AIDS registry.

Heterosexually acquired AIDS may also account for a large proportion of AIDS cases with an undetermined HIV exposure, as a result of the stringent AIDS surveillance criteria for determining risk of individuals who are neither homosexual males nor IDUs. Unlike the criteria for MSM and IDUs, who must only be behaviorally identified in one of these groups, according to CDC exposure classification guidelines an individual with AIDS for whom all but heterosexual HIV risk has been ruled out can be classified as heterosexually exposed only if he or she knows and reports the partner's risk and/or HIV status. In the absence of such information, the case is classified as having an undetermined exposure category. Because many heterosexually exposed individuals do not know or do not report their partners' risk or HIV status to a health care provider, they cannot be categorized as heterosexually exposed and thus numbers reported here are believed to be an undercount of the true epidemic among heterosexually-exposed individuals.

The New York City Department of Health now reports risk as "probable heterosexual" for individuals with limited risk information who meet one of the following criteria: country of origin is one in which heterosexual transmission of HIV predominates; history of

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heterosexual prostitution (commercial sex workers or persons who exchange sex for money or drugs); history of sex with a prostitute of the opposite sex; history of multiple heterosexual partners; history of sexually transmitted diseases; and history of crack/cocaine use. However, because areas outside of New York City have not implemented this system, data on “probable heterosexual” risk are not presented here.

Blood Product Recipients

New York State continues to receive reports of new AIDS diagnoses among individuals who received blood and blood products both prior to and after the implementation of HIV antibody screening procedures for donated blood in March 1985. The New York State Department of Health Bureau of HIV/AIDS Epidemiology and the New York City Department of Health Office of AIDS Surveillance continue to monitor such reports to identify actual risk.

Individuals for whom Exposure Category is Undetermined

Individuals with an undetermined mode of exposure may fall into one of several categories: people currently under investigation by public health representatives; people for whom no mode of exposure was identified because the individual died or was lost to follow-up; and people for whom adequate follow-up information revealed no exposure which met the

Centers for Disease Control and Prevention’s standards for risk classification. The proportion of AIDS cases reported without an HIV exposure category has increased in recent years, due in part to the increased volume of cases following the 1993 expansion of the AIDS surveillance case definition, the increase of reporting from non-hospital sources (especially lab-based reporting) and the probable increase in heterosexual HIV transmission to individuals whose HIV risk behavior is not easily documented.

HIV exposure category has not been determined for 17,869 adult AIDS cases and 93 pediatric cases confirmed in New York State through 1999 (12.9% of total cases) (see Figure 9-3). Included in these are 2,494 cases confirmed in 1999 whose exposure category was not determined by year-end and is still under investigation (see Figure 9-4b). This category also includes nearly 1,000 cases originally classified as “Born in Pattern II Country.” The Pattern II classification presumed heterosexual transmission for individuals born in countries in which heterosexual exposure is believed to be the predominant route of HIV transmission; this classification was discontinued as an accepted HIV exposure category in 1993. The great majority of the remaining cases classified as “Undetermined” is among individuals for whom information on HIV exposure is unavailable.

The proportion of cases with undetermined HIV exposure category varies by demographic characteristics. It is lowest among pediatric cases (less than 9% of pediatric cases diagnosed in 1996-1999), reflecting the relative ease of documenting perinatal HIV exposure. The proportion of cases with an undetermined HIV exposure is highest among the youngest (age 13-19) and oldest (age 60 years and older) adult AIDS cases, with the undetermined exposure category accounting for 58% and 42% of cases, respectively, in those age groups for cases diagnosed 1996-1999.

People of Color

The proportion of new AIDS cases that are among people of color has continued to rise. Of total cases diagnosed in 1999, 84.2 percent are among people of color (Black 51.2%, Hispanic 32.1%, Asian/Pacific Islander 0.8% and Native American/Alaskan Native 0.1%) (see Figure 15-1b). Information on race/ethnicity was unavailable for <0.1 percent of AIDS cases diagnosed in 1999. AIDS Surveillance data may underestimate cases among people of color because of misclassified race/ethnicity in medical records.

Population-based AIDS incidence rates highlight the disproportionate burden of AIDS among people of color (for an explanation of rates, see page 101). In 1999, for every 100,000 Blacks in New York State, 92.3 were diagnosed with AIDS. Among Hispanics, the rate was

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69.9 per 100,000. These rates compare to 5.9 cases per 100,000 Whites in the same period, 5.8 cases per 100,000 Asians/Pacific Islanders, and 8.1 cases per 100,000 Native Americans/Alaskan Natives. However, these rates vary considerably by New York State Ryan White Region (see Figure 10-6.1 through 10-6.3).

People of color accounted for 91.1 percent of AIDS cases diagnosed among women in 1999, 88.4 percent of IDUs diagnosed with AIDS and 90.8 percent of new cases acquired

through heterosexual contact. Of the six pediatric cases diagnosed in 1999, five are Black and one is Hispanic. Blacks have accounted for the largest proportion of total annual incident cases since 1988 in New York State, while Hispanics have accounted for the second largest proportion since 1991. Seventy-four AIDS cases have been diagnosed among Native Americans, and 832 among Asian/Pacific Islanders in New York State. Half of cases among Asian/Pacific Islanders are MSM.

Figure 15-1a

Distribution of AIDS Cases Diagnosed in 1998 by Age at Diagnosis, Race/Ethnicity, Gender and Exposure Category

New York State, Cases Confirmed through March 2000

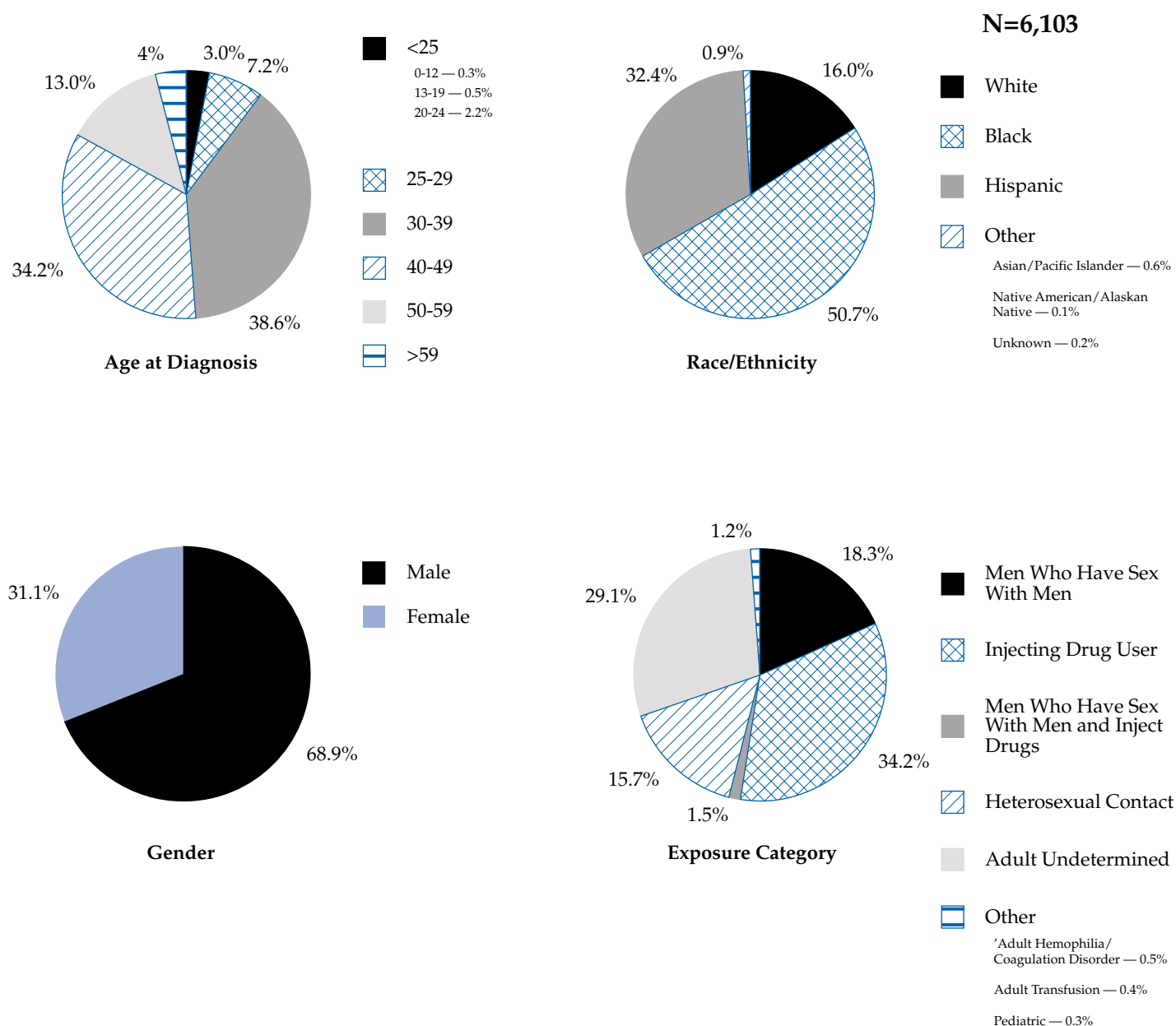


Figure 15-1b

Distribution of AIDS Cases Diagnosed in 1999 by Age at Diagnosis, Race/Ethnicity, Gender and Exposure Category

New York State, Cases Confirmed through March 2000

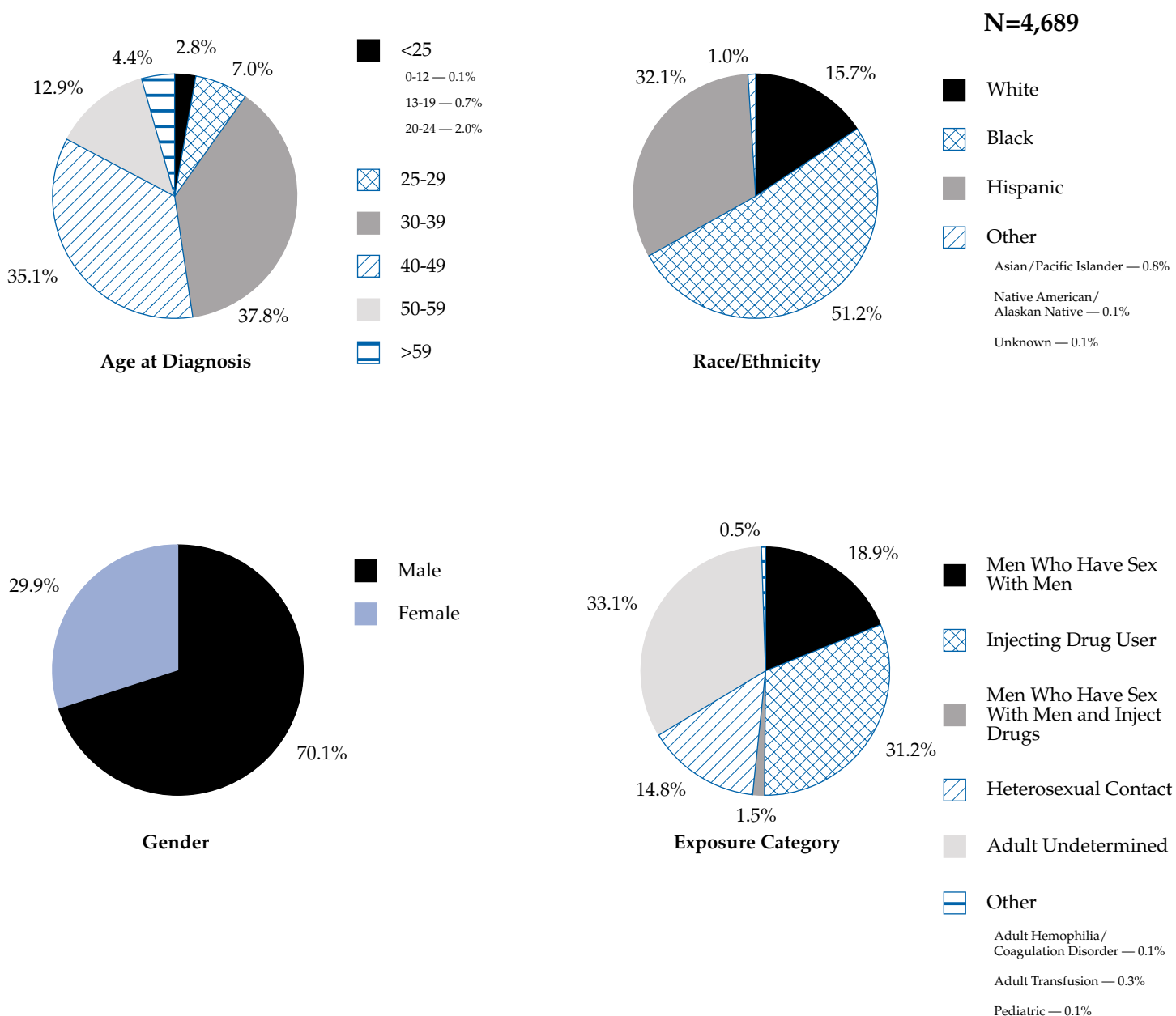


Figure 15-2

AIDS Incidence Among Men Who Have Sex With Men by Race/Ethnicity, Year of Diagnosis and Region*

New York State, Cases Confirmed through March 2000

	White		Black		Hispanic		Asian/ Pacific Islander		Native American/ Alaskan Native		Total†
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
New York City											
90	1,273	51.7	631	25.7	524	21.3	26	1.1	0	–	2,460
91	1,307	48.5	727	27.0	617	22.9	40	1.5	1	<0.1	2,693
92	1,388	45.8	867	28.6	729	24.1	40	1.3	1	<0.1	3,030
93‡	1,482	44.2	976	29.1	860	25.6	34	1.0	2	0.1	3,356
94	1,426	45.3	871	27.6	814	25.8	34	1.1	1	0.0	3,151
95	1,172	45.4	720	27.9	648	25.1	32	1.2	4	0.2	2,580
96	720	39.8	566	31.3	499	27.6	22	1.2	0	–	1,810
97	514	40.1	390	30.4	365	28.5	10	0.8	0	–	1,282
98‡	291	32.3	311	34.5	290	32.2	8	0.9	1	0.1	902
99‡	263	36.3	237	32.7	210	29.0	14	1.9	0	–	725
Total	9,836	44.7	6,296	28.6	5,556	25.3	260	1.2	10	0.0	21,989
Rest of State											
90	412	74.0	105	18.9	37	6.6	1	0.2	0	–	557
91	467	73.9	113	17.9	46	7.3	4	0.6	1	0.2	632
92	494	72.9	141	20.8	41	6.0	0	–	2	0.3	678
93‡	522	69.7	157	21.0	63	8.4	6	0.8	0	–	749
94	445	68.0	162	24.8	45	6.9	2	0.3	0	–	654
95	419	65.5	148	23.1	66	10.3	2	0.3	3	0.5	640
96	283	60.9	133	28.6	45	9.7	1	0.2	0	–	465
97	188	59.3	85	26.8	40	12.6	1	0.3	1	0.3	317
98‡	112	52.1	74	34.4	27	12.6	0	–	0	–	215
99‡	82	50.9	58	36.0	19	11.8	0	–	1	0.6	161
Total	3,424	67.6	1,176	23.2	429	8.5	17	0.3	8	0.2	5,068

* Excludes 2,522 men with dual risk of male-to-male sex and injection drug use.

† Includes 45 men with unknown race/ethnicity.

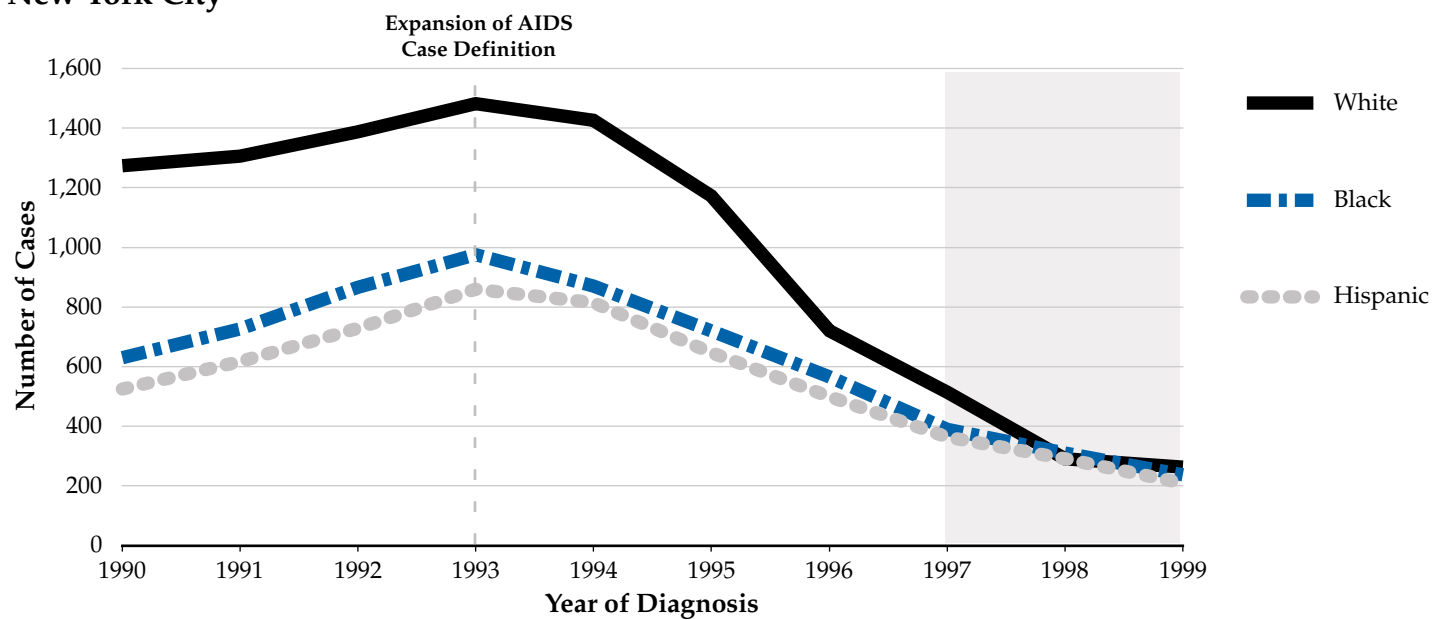
‡ On January 1, 1993, the AIDS Surveillance Case Definition for adults with HIV infection was expanded to include pulmonary tuberculosis, recurrent pneumonia, invasive cervical cancer and severe immunodeficiency (see second page of AIDS Morbidity and Mortality narrative). Data for 1998 and 1999 are incomplete due to lag in case reporting and time required for case confirmation.

Figure 15-3

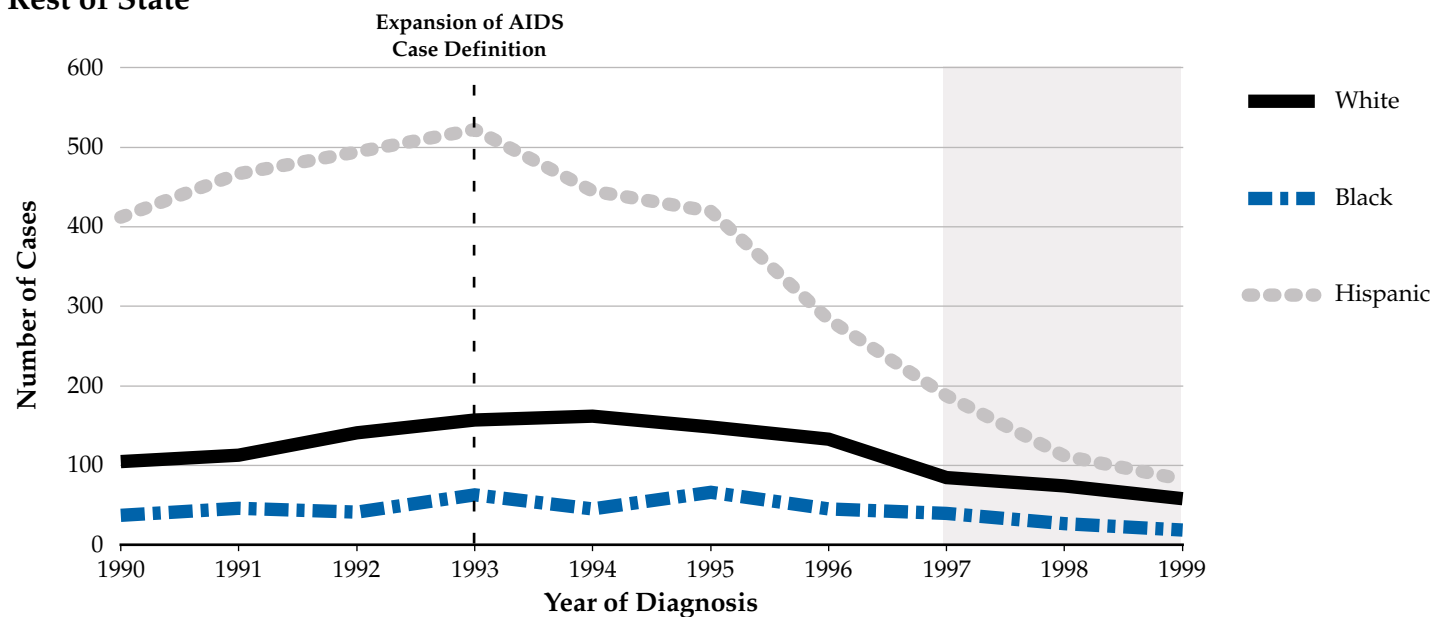
AIDS Cases Among Men Who Have Sex With Men by Race/Ethnicity, Year of Diagnosis and Region*

New York State, Cases Confirmed through March 2000

New York City



Rest of State



On January 1, 1993, the AIDS Surveillance Case Definition for adults with HIV infection was expanded to include pulmonary tuberculosis, recurrent pneumonia, invasive cervical cancer and severe immunodeficiency (see second page of AIDS Morbidity and Mortality narrative). Data for 1998 and 1999 are incomplete due to lag in case reporting and time required for case confirmation.

* Excludes men with dual risk of male-to-male sex and injection drug use. Please note that scales of graphs are not consistent across regions. Due to small cases numbers, Asian/Pacific Islanders and Native American/Alaskan Natives are not presented here.

Figure 15-4

AIDS Incidence Among Injecting Drug Users by Race/Ethnicity, Year of Diagnosis and Region*

New York State, Cases Confirmed through March 2000

	White		Black		Hispanic		Asian/ Pacific Islander		Native American/ Alaskan Native		Total [†] Number
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
New York City											
90	500	13.9	1,722	47.8	1,378	38.2	3	0.1	0	–	3,606
91	616	14.4	2,043	47.7	1,620	37.8	4	0.1	0	–	4,287
92	797	15.1	2,524	47.8	1,944	36.8	11	0.2	0	–	5,280
93‡	812	13.2	2,966	48.3	2,345	38.2	11	0.2	3	<0.1	6,140
94	631	11.6	2,624	48.2	2,176	40.0	5	0.1	0	–	5,440
95	602	12.9	2,196	47.2	1,845	39.6	5	0.1	1	<0.1	4,654
96	379	10.9	1,694	48.8	1,386	39.9	7	0.2	1	<0.1	3,473
97	266	10.6	1,252	50.0	978	39.0	6	0.2	0	–	2,506
98‡	162	9.9	815	49.6	661	40.2	3	0.2	0	–	1,643
99‡	103	8.8	589	50.1	483	41.1	0	–	0	–	1,176
Total	4,868	12.7	18,425	48.2	14,816	38.8	55	0.1	5	<0.1	38,205
Rest of State											
90	221	27.5	363	45.2	214	26.7	1	0.1	1	0.1	803
91	254	24.6	480	46.5	297	28.8	0	–	0	–	1,032
92	382	30.0	572	44.9	315	24.7	0	–	1	0.1	1,273
93‡	371	27.5	614	45.6	356	26.4	2	0.1	0	–	1,347
94	301	23.7	600	47.3	362	28.5	1	0.1	2	0.2	1,269
95	306	27.0	538	47.5	287	25.3	0	–	1	0.1	1,133
96	209	25.3	402	48.7	210	25.4	1	0.1	1	0.1	826
97	136	25.1	284	52.4	121	22.3	0	–	1	0.2	542
98‡	100	22.7	246	55.8	93	21.1	0	–	0	–	441
99‡	65	22.6	156	54.4	64	22.3	0	–	1	0.3	287
Total	2,345	26.2	4,255	47.5	2,319	25.9	5	0.1	8	0.1	8,953

* Excludes 2,522 men with dual risk of male-to-male sex and injection drug use.

† Includes 57 injecting drug users with unknown race/ethnicity.

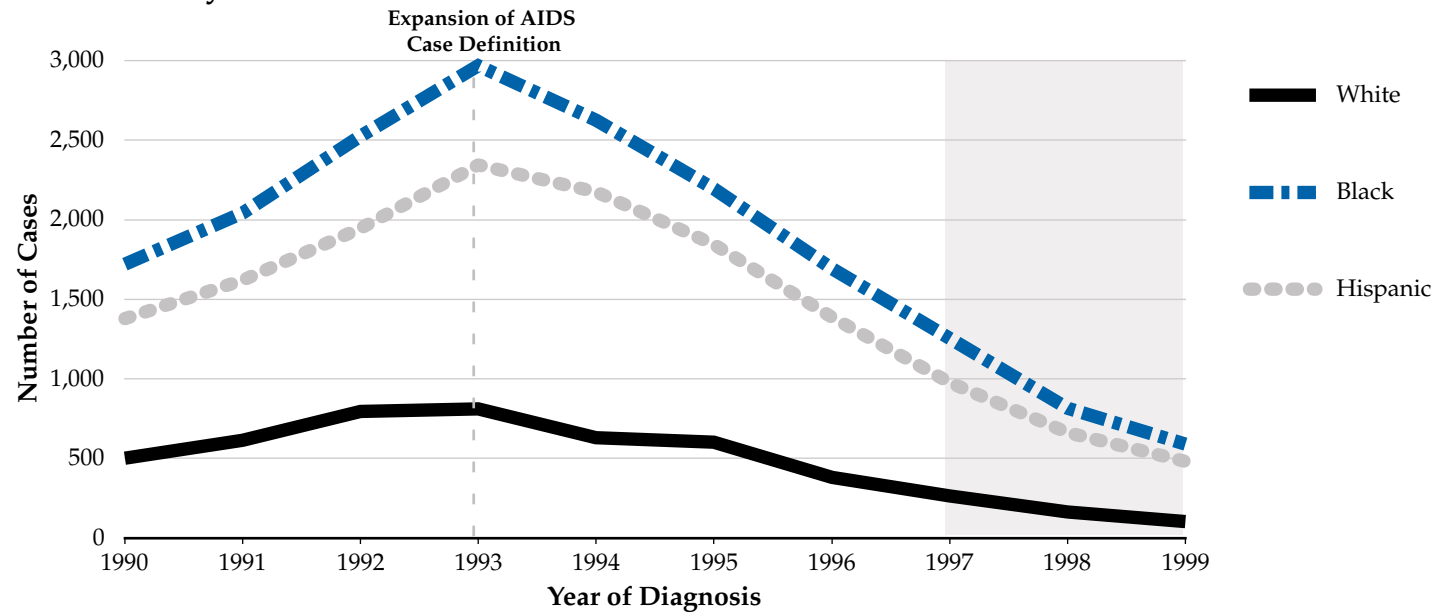
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Figure 15-5

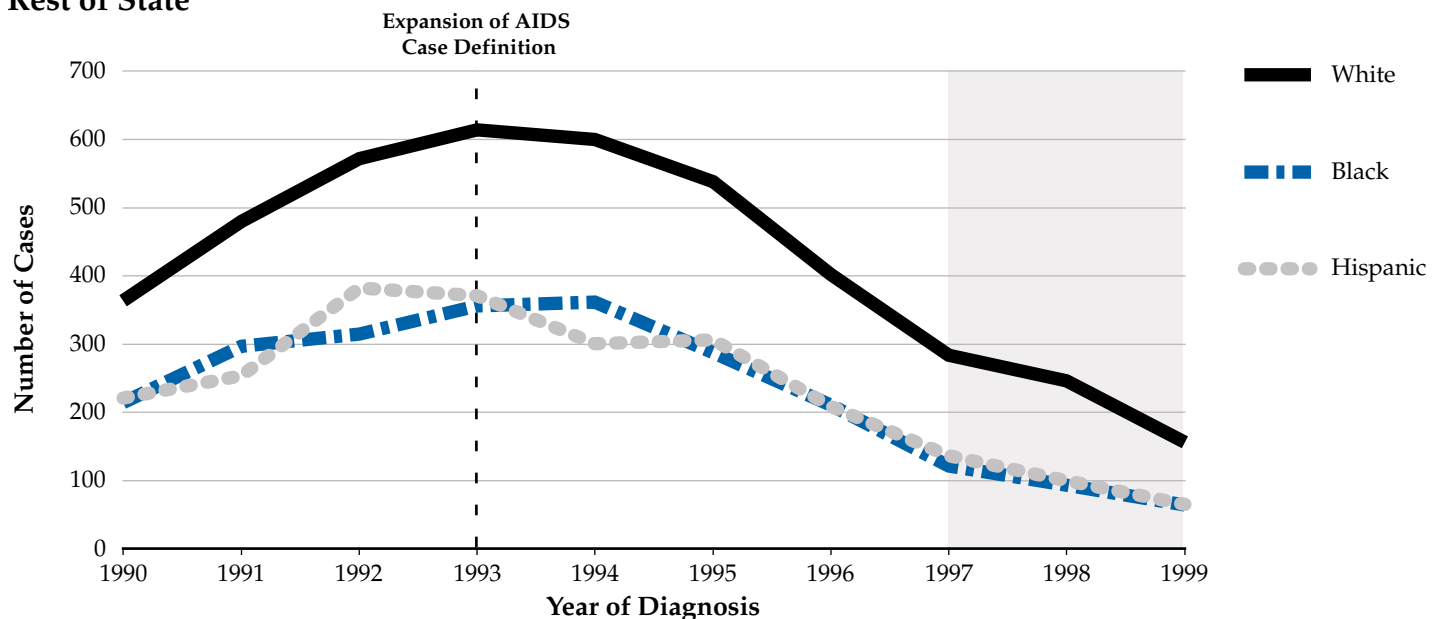
AIDS Incidence Among Injecting Drug Users by Race/Ethnicity, Year of Diagnosis and Region*

New York State, Cases Confirmed through March 2000

New York City



Rest of State



On January 1, 1993, the AIDS Surveillance Case Definition for adults with HIV infection was expanded to include pulmonary tuberculosis, recurrent pneumonia, invasive cervical cancer and severe immunodeficiency (see second page of AIDS Morbidity and Mortality narrative). Data for 1998 and 1999 are incomplete due to lag in case reporting and time required for case confirmation.

* Excludes men with dual risk of male-to-male sex and injection drug use. Please note that scales of graphs are not consistent across regions. Due to small cases numbers, Asian/Pacific Islanders and Native American/Alaskan Natives are not presented here.

Figure 15-6

AIDS Cases Attributable to Heterosexual Transmission by Race/Ethnicity, Year of Diagnosis, Gender, Age at Diagnosis, Exposure Category of Partner and Residence, 1996-1999*

New York State, Cases Confirmed through March 2000

	White				Black				Hispanic				Asian/Pacific Islander				Native American/ Alaskan Native			
	1996	1997	1998†	1999†	1996	1997	1998†	1999†	1996	1997	1998†	1999†	1996	1997	1998†	1999†	1996	1997	1998†	1999†
Gender																				
Male	55	36	39	24	241	214	157	132	156	139	126	78	5	5	3	2	0	1	1	0
Female	120	108	61	40	542	440	344	265	354	296	224	148	8	4	2	4	0	0	0	0
Age at Diagnosis																				
13-19	0	2	0	0	3	4	5	5	1	1	2	4	0	0	0	0	0	0	0	0
20-24	6	8	2	1	28	29	18	16	19	9	16	5	4	0	1	0	0	0	0	0
25-29	20	12	7	6	104	64	51	39	68	49	39	21	0	1	0	3	0	0	0	0
30-39	70	63	49	26	351	286	194	171	232	187	128	86	5	5	3	2	0	1	0	0
40-49	54	40	27	16	198	175	158	100	128	126	95	65	2	2	1	0	0	0	0	0
50-59	17	15	11	11	68	68	56	46	50	44	56	28	1	0	0	1	0	0	1	0
>59	8	4	4	4	31	28	19	20	12	19	14	17	1	1	0	0	0	0	0	0
Exposure Category of Partner																				
Injecting Drug User	62	34	38	31	165	143	95	96	94	98	69	47	2	2	0	1	0	0	0	0
Bisexual Male	5	3	1	0	11	4	1	0	2	3	3	0	0	0	0	0	0	0	0	0
Blood Product Recipient	2	0	1	2	1	2	1	0	2	2	0	2	0	0	0	0	0	0	0	0
Not Reported	106	107	60	31	606	505	404	301	412	332	278	177	11	7	5	5	0	1	1	0
Residence																				
Bronx	15	7	8	9	158	145	90	87	202	164	152	68	2	0	0	0	0	0	0	0
Brooklyn	14	20	9	7	221	196	174	116	98	87	71	45	3	0	1	1	0	0	0	0
Manhattan	21	21	9	0	155	112	78	43	108	93	50	36	3	4	2	2	0	0	0	0
Queens	27	23	17	8	94	74	50	45	52	45	37	44	3	5	1	3	0	1	1	0
Staten Island	4	9	5	2	10	7	6	6	6	3	4	4	0	0	0	0	0	0	0	0
Borough Unknown	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rest of State	94	64	51	38	145	120	103	100	44	43	36	29	2	0	1	0	0	0	0	0
Total	175	144	100	64	783	654	501	397	510	435	350	226	13	9	5	6	0	1	1	0

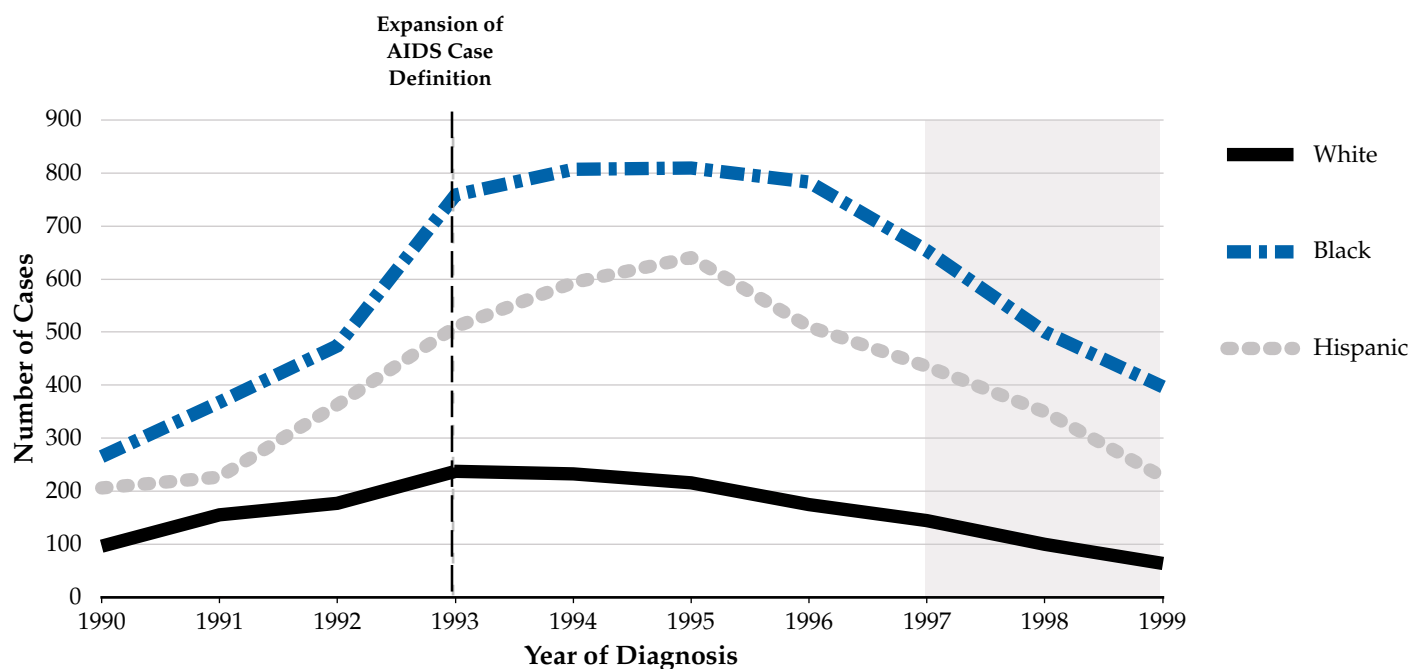
* Excludes four individuals with unknown race/ethnicity.

† Data for 1998 and 1999 are incomplete due to lag in case reporting and time required for case confirmation.

Figure 15-7

AIDS Cases Attributable to Heterosexual Transmission by Race/Ethnicity and Year of Diagnosis

New York State, Cases Confirmed through March 2000



	1990	1991	1992	1993*	1994	1995	1996	1997	1998*	1999*
White	96	155	177	237	232	216	175	144	100	64
Black	265	368	474	759	807	810	783	654	501	397
Hispanic	206	226	363	510	594	641	510	435	350	226
Asian/Pacific Islander	3	3	5	8	11	12	13	9	5	6
Native American/Alaskan Native	0	1	0	0	0	2	0	1	1	0
Unknown	4	0	1	1	3	5	3	0	1	0

* On January 1, 1993, the AIDS Surveillance Case Definition for adults with HIV infection was expanded to include pulmonary tuberculosis, recurrent pneumonia, invasive cervical cancer and severe immunodeficiency (see second page of AIDS Morbidity and Mortality narrative). Data for 1998 and 1999 are incomplete due to lag in case reporting and time required for case confirmation.

